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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,734	01/06/2004	Kiyoe Ochiai	118247	3989

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EXAMINER	
HIRUY, ELIAS	
ART UNIT	**PAPER NUMBER**
2837	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/751,734	OCHIAI, KIYOE	
	Examiner	Art Unit	
	Elias B. Hiruy	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/06/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. An initialed and dated copy of Applicant's IDS form 1449 is attached to the instant Office action.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relay (40) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Applicant refers and teaches how a relay 40 is used in his application. However, this feature is not shown on any of the drawings.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 7-12 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicant teaches how the power of the motor generator and the motor could be calculated and the sum of the two values could be determined to be greater than or equal to zero. The teaching of the application suggests that a power generated by a motor could be zero. It is well known that the only time a power generated by a motor could achieve a value of zero is when the motor/generator is turned off. Thus, it is found by the examiner that the teaching is not enabling to one having ordinary skill in the art.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission

amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

Claim 1 does not show how the "electric motor which is different from said 2Y motor" relates to the apparatus.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rippel et al U.S. 5,099,186 in view of Ono et al U.S. Patent No. 6,529,487.

Regarding claims 1-2, Rippel et al discloses a power output apparatus that comprises a first inverter (40A, figure 1), second inverter (40B, figure 1), and a 2Y motor (12, figure 1) having a first three-phase motor coil (12A, figure 1) and a second three-phase motor coil (12B, figure 1) functioning as stators (column 4 line 38-48). Energization of said first and second three-phase motor coils being controlled respectively by said first and second inverters (column 5, line 1-4). Further, Rippel et al also discloses a power supply connected between a first neutral point of said first three-phase motor coil and a second neutral point of said second three-phase motor coil (34, figure 1).

However, Rippel et al fails to disclose an electric motor that is different from said 2Y motor. On the other hand, Ono et al shows an apparatus that has an electric motor (13, figure 3) that is different from the 2Y motor.

Accordingly, It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the second electric motor in Rippel et al invention. The motivation being that the second motor can be utilized in combination with the 2Y motor to alternatively drive the two motors as a driving motor or generator as taught by Ono et al.

Further, Rippel et al fails to teach, in the manner taught in claim 2, how the 2Y motor generates electric power from a rotational force from an internal combustion engine, and starts said internal combustion engine. On the other hand, Ono et al shows an electric motor generating electric power from a rotational force from an internal combustion engine and starts said internal combustion engine (7 and 15, figure 3) (column 5 lines 25-37 and column 6 lines 20-26).

Thus, It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Rippel et al 2Y motor into Ono et al invention since the method will eliminate additional hardware need to generate electric power and enables one to efficiently use both power sources.

Regarding claim 3, the combination of Rippel et al and Ono et al failed to show how the 2Y motor, said electric motor, and said internal combustion engine are connected to the planetary gear.

Nevertheless, Koide et al shows how a first electric motor, a second electric motor, and an engine are connected to a planetary gear (column 30, lines 5-17).

Thus, It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the planetary gear used in Koide et al into the combination of the two patents. The motivation being that using a planetary gear in hybrid systems is known to provide a distribution mechanism that enables the effective use of all power sources on board.

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rippel et al U.S. 5,099,186 in view of Ono et al U.S. Patent No. 6,529,487 further in view of Koide et al U.S. Patent No. 5,936,312.

Regarding claims 4 and 5, the combination of Rippel et al and Ono et al have a 2Y motor and an electric motor that is different from the 2Y motor, which was described above while discussing the limitation of claim 1. Although both Rippel et al and Ono et al show a control unit, Ono et al control unit posses the functions of the control unit of this application. The control unit is used to operate the first electric motor, the second electric motor, and the Engine in the same manner as described by claim 4 of this application.

The combination of the two patents, however, fails to show an inverter that can be used to control the second electric motor, which is different from the 2Y electric motor.

However, Koide et al discloses an apparatus that has a control unit (90, figure 1) a first electric motor (30, figure 1), a second electric motor (40, figure 1), and an engine

(50, figure 1). The second electric motor of Koide et al discloses an inverter (92, figure 1) that is used by the control unit to control the electric motor. Further, the control unit of Koide et al also shows similar functions as the control unit of this application.

Regarding claim 5, it is shown in the previous paragraph how the limitations of claim 4 are met by the combination of the two patents. The limitation of claim 5 are met by Rippel et al as it teaches how the control unit connects/disconnects the power supply from the said first and second neutral points (column 3 lines 65-68 and column 4 lines 1-20).

Accordingly, It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Koide et al inverter into the combination of Rippel et al and Ono et al invention since the method of using inverters to control an electric motor is well known in the art.

Regarding claim 6, Rippel et al teaches about an input/output port 30 (i.e. a relay) that is controlled by the control unit 100 to connect/disconnect said power supply to/from said first and second neutral points (column 3 lines 65-68 and column 4 lines 1-20).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to attached PTO-892 form.

Remarks

8. No claim is allowed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias B. Hiruy whose telephone number is 571-272-6105. The examiner can normally be reached on 7AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EH

03/15/2005